GrummanWorld

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# O'Brien States Corporate Values, Sets Objectives

"We can go anywhere we want to if we all pull in the same direction," says Grumman President John O'Brien. "But everyone has to know where we're going, why, and how we're going to get there. Otherwise, we're working against each other."

For this reason, O'Brien and a small group of Grumman senior managers recently spent two days together, hammering out the company's values and objectives. "We wanted to spell out what we stand for as a company," says O'Brien. "Sometimes you get so busy doing your job that you forget why you're doing it. There's nothing brand-new in our statement of values. Honesty, fairness, quality, teamwork — all of these things have always been important to Grumman people. But by putting them down on paper and making sure that everyone understands them, we are re-dedicating ourselves to the principles that set us apart."

The statement of corporate objectives outlines the company's overall business plans. "In a company as large as ours, it's easy to lose perspective," says O'Brien. "We tend to concentrate on our own areas, and lose track of what we're trying to accomplish across the board. That doesn't work. People in our Aircraft Systems Division need to know what the Data Systems Division is reaching for. People who build trucks need to know what our space business looks like."

O'Brien points out that the statement of objectives gives the company's basic direction — but it's not a detailed road map.

"Each operating division will continue to develop its own goals and objectives as part of its business plan," he says. "Those plans in concert with the corporate statement of objectives are very specific, and they contain information that would be quite useful to our competitors. Therefore we have to treat the information accordingly.

*John O'Brien*

"But everyone in the company should become familiar with the statement of corporate objectives. It's absolutely necessary if we are to succeed."

O'Brien comments that the senior management group did a lot of pushing and pulling and soul-searching to arrive at the statement of objectives. "It was a tough process. But at the end of it, we came up with a plan that has everyone's support and commitment. There's always time for argument and discussion — but once a decision is reached, you need everyone to pull together. We've done that, and we're going to achieve all of our goals."

A number of other initiatives were established at the meeting, including the "Grumman Total Quality Process" mentioned in the statement of objectives. Several months ago, Grumman hired an outside consulting firm to talk to 2,800 Grummanites from all over the company. The Quality program is a result of that survey, and it will require special training in a new quality process. "That training will begin with me, and all of our division presidents," says O'Brien. "Each person in this company will be given a specific assignment that will help improve the quality of our work."

This new program — and the other plans for Grumman's process of renewal — will be discussed in upcoming issues of *Grumman World*.■

## Our Values

Grumman people have developed a set of shared values that create a sense of who we are and what differentiates us from other companies.

Our business purpose is to understand thoroughly our customer's needs and expectations, provide quality products and services that meet those needs and expectations in a cost effective manner and provide our shareholders an attractive return on their investment.

We believe in providing leadership that stimulates teamwork and mutual respect, encourages creativity and rewards individual performance.

Our corporate personality is shaped by the development and application of advanced technologies.

We attach great importance to dealing with people honestly and fairly. This governs our relationships with our customers, with our suppliers, with our community neighbors and with one another in the company.

In all our activities we are driven by the understanding that this is our company and that each of us has a personal stake in its future. We realize that our success as well as our corporate character depend on the total quality of the work done by each one of us.

## Our Objectives

This statement is to inform all Grumman employees of the direction that we will take to ensure a solid business base for the company in the years ahead. We start from a position of four basic strengths: a talented, loyal work force; a diversity of programs and customers; an understanding of advanced technologies; and modern engineering and production capabilities.

From an overall business perspective, we will:

- Achieve progressive growth in annual sales and improved after-tax profits. Specific goals will be established for each division to meet corporate objectives.
- Enhance our relationships with our customers, the investment community, government policy makers, and our industry's leaders.
- Institute a Grumman Total Quality Process in 1988 to enhance our competitiveness. This concept will demand the direct participation and total commitment of the entire Grumman team, starting with the chief executive officer.

Grumman's market objectives for the near term are as follows:

- Maintain our position as a premier tactical aircraft developer and builder.
- Expand our space business through our nuclear, sensor system, radar and vehicle expertise.
- Expand our systems integration and professional services expertise without limitation to any particular platform.
- Expand our electronics systems business through further applications of existing products and initiatives such as robotic vehicles and missiles.
- Expand our data systems integration efforts with emphasis on custom systems applications to the Federal market and through the expansion of the third party computer maintenance business.
- Aggressively participate in subcontracts using available assets.
- Maintain our leadership position in the specialty commercial vehicle market.
- Expand international sales of our products and services.

In pursuit of these objectives, we will establish priorities for selected new business targets. Two vital events for the company in the early 1990's are a BSTS win and a successful Joint-STARS development program leading to award of a production contract.

**Screen Test.** *Suffolk County Executive Patrick Halpin talked with computer systems analyst Kevin Caulfield and other Grummanites when he visited the Great River facility to talk with folks working on VDTs.*

# Grumman Suffolk Facilities To Follow New VDT Law

In Suffolk County, Grumman facilities will soon be forced to follow a new video display terminal law. The law will take effect when it is filed with the secretary of state in Albany, N.Y., over the next two weeks.

Suffolk County Executive Patrick Halpin had sponsored a state VDT bill last year when he was a state legislator. However, he changed his position and vetoed the Suffolk bill, saying that scientific and medical evidence did not convince him that VDTs would pose health and safety risks. The 18-member county legislature overrode his decision by a vote of 13 to 5.

Grumman Vice President and Secretary Bob Bradshaw says that Grumman is still determining the impact of this law.

"We didn't agree with the VDT bill, and we voiced our objections to it," says Bradshaw. "We take great pride in protecting our people from any workplace hazards and giving them a productive working environment. From that perspective, the bill was unnecessary. Nevertheless, we will implement the required changes in Suffolk County."

Under the bill, Suffolk businesses with more than 20 employees must give breaks or alternative work assignments for 15 minutes every three hours, if a person works more than 26 hours a week at the terminals. The employer must also pay 80 percent of the cost of annual eye exams and prescription glasses.

"We will assess the guidelines of this provision and abide by them," says Bradshaw. "However, we encourage everyone to take good care of their eyes —not just the VDT user." Grumman presently offers its employees eyeglasses at a discounted price.

The bill also calls for the implementation of specially designed computer equipment, including glareproof screens, appropriate lighting and five-legged chairs. The chairs must be height adjustable. Keyboards and keyboard tables must be movable, so they can be comfortably positioned.

Equipment already in use can stay. However any equipment purchased after January 1, 1990, must comply with the new regulations.

"We do not see this as a major change for Grumman," says Bradshaw. "The company has a practice in effect already that ensures a proper working environment for all employees. However, we will revise the policy, if necessary, to accomodate the new requirements."

Grumman has over 8,000 employees working in Suffolk County, and 3,000 VDTs. "We are in the process of determining exactly how many people work on the terminals for more than 26 hours a week," says Bradshaw.

Halpin had argued that enacting the VDT bill might force some businesses to move from Suffolk or deter others from relocating to the county. He claimed that the bill would put the companies at a competitive disadvantage.

Bradshaw agrees. "Grumman does not currently plan to move any of its facilities from Suffolk County just because of the VDT law," says Bradshaw. "However, if we were looking to open a new facility that required the use of many terminals, we certainly would think twice about choosing Suffolk as its location."

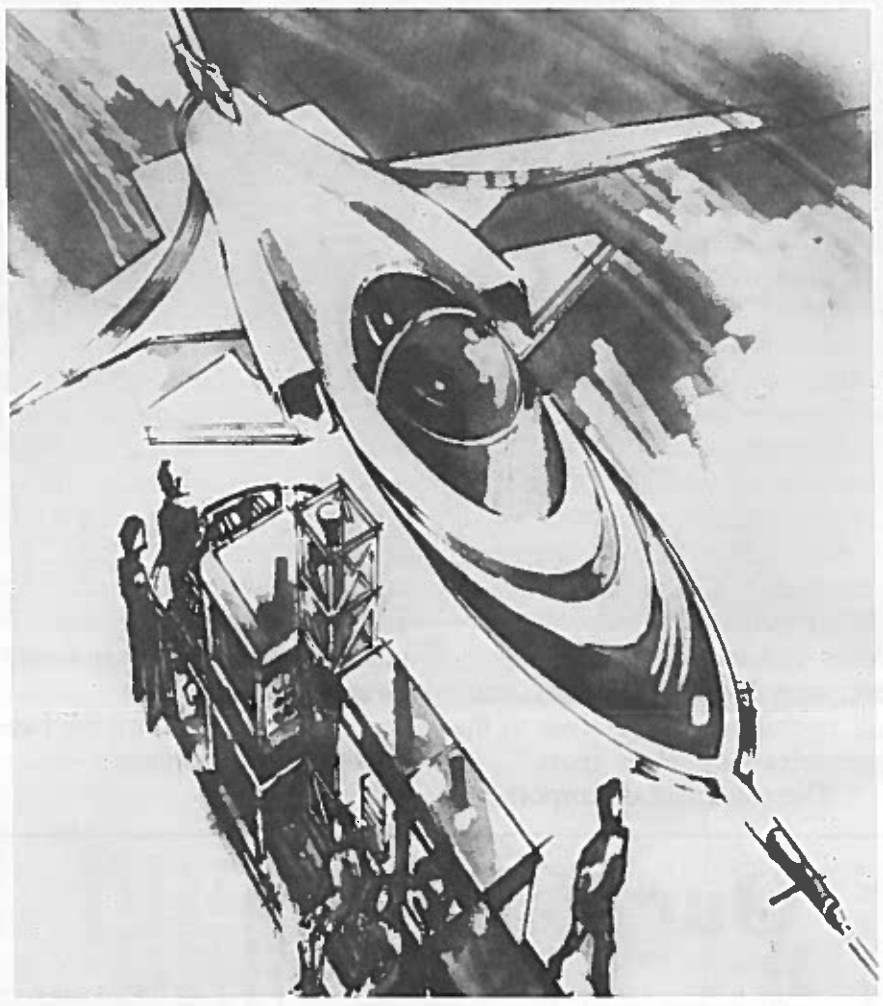
Six months from now, the bill mandates that firms offer training programs on proper VDT use. "We believe in that," says Bradshaw.

"Grummanites have a proud tradition of caring for each other," says Bradshaw. "If there were any danger here, we wouldn't dream of knowingly exposing anyone to it. We don't need legislation to make us protect Grumman people."■

# X-29 Mockup To Debut At Smithsonian Next Year

In May 1989, a new gallery exhibition depicting the computer revolution in aerospace will open at the Smithsonian's National Air and Space Museum. A full-scale mockup of the Grumman X-29 will be featured.

"Beyond the Limits: Flight Enters the Computer Age" will be organized in seven exhibit areas to illustrate the primary applications of the computer in aerospace: design, aerodynamics, computer-aided manufacturing, flight testing, air operations, flight simulators and space operations. Each exhibit will include at least one "hands-on" interactive computer so that visitors can see for themselves the kinds of tasks that computers regularly perform.



**Coming Soon To D.C.** *A full-scale mockup of the Grumman X-29 will be featured at a new exhibit opening in Washington, D.C., at the Smithsonian National Air and Space Museum.*

# Personals

My family and I wish to thank our friends at Grumman for their kind expressions of sympathy upon the recent death of my mother. **Harry Bodnar**

My family and I sincerely thank all our Grumman family and friends for their sympathy and concern for us during the sudden loss of our daughter Nancy. **Ray Neubeck**

My family and I wish to thank all my co-workers, friends and ESO for their kindness and sympathy shown to us in the recent death of my father. **William Flatley**

My family and I would like to thank all our friends for their prayers, kindness and sympathy during the recent loss of our daughter Amanda. We would also like to express our appreciation to those who contributed to the March of Dimes Remembrance Fund in her name. Thank you all. **Ralph Harris**

I wish to express our deep appreciation to all his many friends at Grumman for their kind expressions of sympathy at the death of my husband Lewis Golden and for their support during his long illness. **Grace Golden and Family**

My family and I would like to express our sincere thanks to all my friends, co-workers, ESO and for the very generous contribution made to my sister's church. Your thoughtfulness has meant so much and certainly helped to ease the pain. It's wonderful to have so many caring friends. **June L. Hardwick**

***Next Issue: July 8***

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**Norine Lyons**
*Director - Corporate Publications*
*575-3720*

**Kathleen Housley**
*Editor — 575-3293*

*Associate Editors*
**Bob Sample** — *575-5118*
**Susan Vassallo** — *575-8999*
**John Vosilla** — *575-5119*

**Bernadette Gately**
*Editorial Assistant — 575-4334*

# Caporali Elected Vice Chairman-Corporate Technology; Oram To Head Grumman Aircraft Systems Division

On June 16 the Grumman board of directors elected Dr. Renso Caporali vice chairman—Corporate Technology. He succeeds Will Bischoff, who is retiring.

Pete Oram was appointed to succeed Caporali as president of the Aircraft Systems Division. Oram was formerly senior vice president—Aircraft Programs for the division.

Both men will assume their new posts on July 1.

In his new post, Caporali will direct the technical resources of all Grumman divisions.

"Renso Caporali has 29 years of Grumman experience in both the technical and management aspects of weapon systems," said Grumman President John O'Brien. "He can make sure that we are allocating our technical people and investments in the best way to serve our customers."

Caporali joined Grumman in 1959 as a structural flight test engineer, following his service as a pilot in the Navy. He held posts as director of design engineering; director, Air Force Advanced Tactical Aircraft; and director, advanced systems technology.

*Renso Caporali*

*Pete Oram*

In 1980, Caporali was elected Grumman Aerospace's vice president—Development. He then became vice president—Advanced Technology Development and deputy director of Marketing and Advanced Technology Development.

In 1983, he was elected senior vice president—Technical Operations. Two years later, he became president of the Aircraft Systems Division.

Caporali holds two master's degrees and a doctorate in aeronautical engineering from Princeton University. He earned these through a flight test fellowship from the American Institute for Aeronautics and Astronautics.

Oram joined Grumman's Data Management department in 1959 after serving as a pilot in the Air Force. He became assistant director of contracts for Aircraft and Marine Programs in 1967; F-14 business manager in 1968; and director of contracts in 1969.

Oram was awarded an Alfred P. Sloan Fellowship to Massachusetts Institute of Technology in 1970, and received his master of science in management in 1971. He was then appointed F-14 program manager.

In 1973 Oram was elected a vice president of Grumman International, and president of that subsidiary the following year. He was elected senior vice president—Aircraft Programs in 1980.

"Pete Oram has been responsible for all our military aircraft programs for the past eight years, working directly with Grumman program management as well as the customer," said O'Brien.

"Renso Caporali and Pete Oram bring to their new assignments solid business experience and a demonstrated commitment to objectives," he continued. "Their first responsibility will be to make sure Grumman is one of the U.S. government's best contractors."■

## Unit Values

The Employee Investment Plan's unit values as of April 30 (compared to March 31 figures) were:

**Equity Fund**
*4.216* (up from 4.196)

**Fixed Income Fund**
*6.090* (down from 6.107)

**Guaranteed Income Fund**
*2.764* (up from 2.741)

**Company Stock Fund**
*$21.31* (down from $23.12)

## EIP Announces Rate For Second Half

The Grumman Employee Investment Plan has announced a Guaranteed Income Fund rate that will be in effect for the last six months of 1988.

From July through December, money on deposit in that fund will earn an effective annualized yield of 10.75 percent. The rate was adjusted for just the first half of 1988 and readjusted for the second half because of the volatility of the financial markets.

# Grumman Adapting New Missile To Intruder

Three flight tests of a scheduled 15 have been completed to learn what a Harpoon missile derivative does to the flight characteristics of the A-6E. The flights are taking place at Calverton, Long Island.

Aircraft Systems Division is under a subcontract to the McDonnell Douglas Missile Company, which is developing the Standoff Land Attack Missile (SLAM) missile. The SLAM will allow A-6E crews to attack land targets from a safe distance. Engineering work began about 18 months ago by the Grummanites on the A-6E program, which is based in Melville, Long Island.

The Harpoon is a radar-guided, anti-ship missile, similar to the Exocet, that guides itself to the target. However, says A-6 program deputy director Chuck Darling, "in the land-attack mission there is so much clutter that you can't use radar."

So the SLAM is controlled by the A-6's bombardier/navigator when it gets close to the target. The B/N sees the target through the infrared "eyes" of the missile. He can pick out the target from among buildings or other structures around it.

To make room for the infrared system, McDonnell Douglas stretched the missile by 22 inches. With the new electronics and greater length, the missile put on about 200 pounds.

Nonetheless, says Darling, "we really didn't have to modify anything on the plane."

All 15 flight tests will be conducted at Grumman's Calverton Flight Test facility. No missile firings will be conducted there.

"Our job is to verify that the aircraft can carry the missile throughout its flight envelope. We don't believe there will be any envelope restrictions," Darling says.

The Navy will start the airborne missile firings next year.■

# Grumman Working On Space Station Simulator Facility Study

Grumman Data Systems Division is part of a team that will define the requirements for a Space Station simulation facility.

The division will work with TRW on a 15-month study contract for the Marshall Space Flight Center, Huntsville, Alabama. During the project, requirements will be determined and several different conceptual designs will be defined. These requirements and designs will form the basis for a subsequent contract to build the facility.

The facility will be used for simulation and training associated with activities aboard the station's laboratory module. It will be used to train scientific flight crews and their associated ground support personnel, as well as to perform crew procedure validation. ■

**Big Business Award.** *The U.S. Small Business Administration selected Grumman as its Distinguished Prime Contractor of the Year, Region II. At the award ceremony were (L to R): Grumman Vice President of Procurement - Bob Simon; Harry Menta, SBA; Charles Freeman, SBA regional administrator; Frank Sorrentino, Grumman's Small Business liaison and director, Corporate Procurement Divisional Support; Grumman President John O'Brien; Andy Zuber, SBA; and Tom Dumaresq, SBA.*

# Grumman Wins Prime Award For Work With Small Firms

The United States Small Business Administration recently named Grumman its first Distinguished Prime Contractor of the Year, Region II. It is the first time such an award has been given by the SBA. Nine other regional awards were given out.

Grumman President John O'Brien accepted the award which was presented in honor of Grumman's outstanding efforts in working with small business subcontractors in Region II. Region II includes New York, New Jersey, the Virgin Islands and Puerto Rico.

Grumman does business with over 6,000 small businesses and minority-owned firms in the United States. More than 2,800 of them are in Region II.

There are regulations that prime contractors must comply with when dealing with these businesses. The regulations primarily require a company such as Grumman to extend the maximum opportunity to them to become company suppliers.

Bob Simon, vice president of Corporate Procurement says Grumman tries to go well beyond just complying with the rules.

"Grumman actively helps these companies go through the necessary steps to becoming a Grumman supplier," says Simon. "We give advice from filling out the supplier application to helping the company get appointments with the proper Grumman procurement personnel.

"These businesses are an integral part of Grumman's daily activities," says Simon. "We want them to be successful."■

# Guarino Elected Corporate VP

On June 16 the Grumman board of directors elected Tom Guarino Grumman Corporation vice president and assistant to President John O'Brien for special assignments. He assumes his new post July 1.

Guarino began at Grumman in 1961 as an Advanced Systems group leader. In 1964, he was named EA-6B systems project engineer, and over the next six years served as electronics project engineer, engineering manager and then program manager.

Guarino became E-2C program director in 1970 and was elected a Grumman Aerospace vice president in 1975. In 1976, he was appointed director of Navy programs, a responsibility that was expanded soon thereafter to encompass all Grumman aircraft programs. Since leaving Grumman in 1979, Guarino has held a variety of positions in the aerospace industry.

Guarino holds a master of science degree in industrial management from Columbia University.■

## *Summer Is Really Here*

Food Services opened "Picnic In The Park" at McKay Field on Tuesday, June 14. Lunch is served from 11:30 a.m. until 1 p.m. McKay Field is next to Building 24, near Stewart Avenue, in Bethpage.

# *Work Beginning On New Technical Services Building*

On June 13 Grumman Technical Services Division broke ground for its new headquarters building in Titusville, Florida.

The ceremonies there were hosted by Technical Services Division President Wiley Williams. Grumman St. Augustine President Joe Walter, Aircraft Systems Vice President Bob Watkins and Services Division Vice President Jake Bussolini also attended the meeting.

"We see this investment as further evidence of Grumman's continuing commitment to the U.S. space program," Williams said. "In addition, our new headquarters building will provide us the necessary room for growth as we pursue new opportunities in our other business areas."

The new headquarters is being constructed three miles away on Columbia Boulevard, the main road to the Kennedy Space Center. Technical Services will lease this building from the developer; the division also leases its present headquarters. The new 41,500 square-foot, one-story building is more than twice as big as the division's present headquarters.

"We are awfully crowded there now, and we have to plan for the growth of our staff by another 20 to 30 people by the end of the year," says Williams. "Plus, part of our office space is modular under a temporary permit that is expiring and we will lose even more space. We had to do something about that."

There are now about 120 people working in the present division headquarters. The new building will have accommodations for up to 180 Grummanites to provide management, personnel, payroll, accounting and computer support services for the division.

Technical Services is a major subcontractor to Lockheed on the Shuttle Processing Contract. The division is also the headquarters of Grumman's far flung field service operation, supporting Grumman and other manufacturers' products for the U.S., foreign governments and commercial customers throughout the world.

# *It Won't Be The Same Old Picnic This Year*

Wouldn't you just love to show your kids the planes Grumman builds? Not photos or models, but the real things?

Your chance is coming. A display of Grumman aircraft is just one of the attractions planned for this year's Grumman Family Picnic, scheduled for Saturday, July 16 (rain date is July 17).

"We are hoping to have an F-14, an A-6, an EA-6B, and maybe even an E-2C," says Employee Services manager Gerry McMahon. "Exactly which planes will be there isn't final, but we will have an excellent display." Grumman flight crew members will also be there to answer questions.

It's all part of an ongoing effort to bring more Grummanites and their families to this traditional event, which has been going on for 48 years.

New, too, is the big prize planned for the drawing. Everyone who buys a ticket to the picnic has a chance to win a $500 gift certificate, up from $400, good at a local appliance store.

Of course, there'll be rides for the kids. There will also be great entertainment on tap. In the spotlight on the bandstand will be an animal act and a magic show.

Prizes will be awarded to the winners of the various field events. A new event will be added this year: a 20-yard dash for four- and five-year olds.

Grumman has added corn on the cob to the picnic menu that includes hot dogs, soda, milk, beer and ice cream.

Of course, if you're planning to make the picnic a get-together day with your co-workers and their families, plan on arriving early to get a picnic table at a nice, shady spot. The gates open at 8 a.m. (Don't forget: one person in each car entering the Calverton picnic grounds must be a Grumman employee.) Bring your own lawn chairs, barbecue grill...jazz it up any way you like.

In between all the activities, the Grumman band will be belting out tunes. The grand prize winner will be chosen at 2 p.m. The food counters close at 3 p.m.

Don't let this picnic pass you by. Get your tickets at your local Employee Services office. They're $5 each, but children under 12 get in free. Look for the planes by the ball fields.■

## Bischoff Looks Back On His 40-year Career

# *'You Must Believe You Can Do Things That Haven't Been Done Before'*

For the last month, Vice Chairman-Corporate Technology Will Bischoff and his wife Carol have been living on their sailboat at a Huntington, L.I., marina.

"We're living out of a thimble," says Bischoff with a smile. "It's been difficult getting ready for work."

Come Monday morning, Bischoff won't have the hassle. Today, June 24, is his last day at Grumman. He retires after an illustrious 40-year career.

Colleagues find it fitting that Will Bischoff would spend his last working days living aboard a sailboat. Throughout his career, they say, he has been an unflappable type of guy who rolls with the waves.

Reflecting on his career, Bischoff is very relaxed. He is modest and reserved, constantly attributing his success to those who helped him over the last four decades.

"From day one, I've had the privilege to have the constant support of hundreds of people," says Bischoff. "I've been very lucky — not a day of regret in my 40 years at Grumman."

Never had a bad day and drove home pounding the steering wheel? "Well, at least, I never came back the next day pounding the steering wheel," he replies.

He started at Grumman in the winter of 1948 making canopies for the F9F-2 in the Plant 5 Prototype shop. "Six months later, I moved upstairs in Plant 5 to engineering — that is a big moment in an engineer's life."

In those days, all engineering graduates first spent several months in manufacturing before moving into engineering assignments. It is a practice that Bischoff would like to see reinstated for structural and mechanical engineers. "However, there are areas where it won't work. For example, many engineering graduates specialize in technologies that are totally unrelated to the physical part of the airplane. There is no value in putting a software engineer in manufacturing.

"Back in 1948, you leaned over a drawing board and created an idea for a part, and then you could go downstairs in a matter of hours or a day and see it. You could touch it, feel it and see it being made.

"In a way, I feel sorry for the engineer today. He sits at the scope, creates a design and its reality is months, sometimes years away. Often he never gets the chance to put his hands on it. That kind of experience is hard to come by today in a large, complex organization that builds large, complex products."

Bischoff is quick to add that that was then, this is now. "In recent years, a fundamental change in the nature of defense products has taken place," he says. "The one-time need for diversity and numbers of defense products has been replaced with a procurement climate dictating fewer products — of unprecedented size, scope, capability and complexity. This has led to customer demands for new and innovative approaches on the part of the contractor."

Changing technology has demanded change in Grumman's approach to design and development. "The sheer size and complexity of our current projects make it almost impossible for any individual, small group or even division to completely understand and support a sufficient subset of the necessary technologies," adds Bischoff.

"Change is upon us. If we don't change with it, we will not survive," he says. Last October, Bischoff was appointed director of the newly formed Office of Corporate Technology. The Office is designed to bring the company's technological assets into focus at the corporate level.

"Engineering in the year 2000 will be very different from what it is today. The most obvious change is that there is going to be a good deal less paper. If we fail to make that happen, it will be a disaster.

"Our competitors and the government are going to work that way, and we'll have to do the same thing. We must start living more and more in a computer-based, data-based society.

Ideally, Bischoff would like to see engineers spend a lot more time being engineers, rather than being communicators.

"Communication really should be with the computer and its data base," says Bischoff. "The means of doing that today are at hand. However, it requires two things that we haven't got: capital investment and a very drastic cultural change.

**'It was marvelous to be involved in probably the technological accomplishment of the century.'**

"We need to invest heavily in the actual hardware and software needed to set up such an elaborate network. On the other hand, cultural change comes easier every day because the young people bring it with them direct from college. They were raised in the computer age. The older, more experienced engineers such as myself have difficulty adapting to the necessary cultural change."

Bischoff came to Grumman with an associate's degree in aeronautical engineering. From 1950 to 1957 he commuted to New York University in Manhattan after work to pursue his bachelor's in mechanical engineering. "I got a lot of help from the company," he says. "Through the tuition reimbursement program, Grumman paid for half of my education.

"Aircraft engineering was what I wanted to do more than anything else in the world," he adds. "In those days, if you became project engineer, you were it. The project engineer ran the whole program — you didn't have great huge organizations like today. Airplanes were simpler then too."

He held a number of posts, including structural design group leader on the S-2F, W2F and F9F-8T. In 1961, he joined the vehicle engineering group on the Lunar Module and became engineering manager in 1969. He continued as the LM program manager for engineering through the Apollo 17 mission.

"My experience on the LM program was a career within a career — a capsule of my life isolated from everything else. It was an honor," reflects Bischoff.

"The challenges were beyond your imagination. Imagine sitting around a table in 1960 speculating on what the surface of the moon was. We had a meager amount of data. It seems silly in 1988, but then, we had to use a lot of imagination."

Recalling the LM years, Bischoff says that there were long hours and hard work. "No questions about it, those years were the highlight of my career. It was marvelous to be involved in probably the technological accomplishment of the century."

After serving as engineering manager on the Shuttle Wing Program, Bischoff became director of Design Engineering. In 1981, he became head of Engineering. Two years later, he was named vice president and chief engineer. In 1986, he was elected Grumman Vice Chairman-Technology.

Bischoff believes that some people are born engineers. "At a very early age, mechanical and structural engineers develop the interest, the curiosity and the fascination with physical things. It's not something that they acquire. They are born with the necessary curiosity and imagination."

**'Aircraft engineering was what I wanted to do more than anything else in the world.'**

What advice would he give to younger engineers? "Sooner or later you put your career on the line. You can't be successful if you are a passive engineer. You must say 'I will see this task to completion and make it work although I know there is a risk.'

"You do run the risk of falling on your face and failing, but I encourage all young engineers to step up to the challenge anyway. It stretches your ambition and your imagination. You must believe you can do things that haven't been done before.

"After all, why are engineers here? Not to do things that were done yesterday, but to do things for tomorrow," says Bischoff. "Our world is one of creation. Take some initiative. Stick your neck out. Just think what it would be like if we lived in a society where engineers wouldn't take any risks. What would we have?"■

**Ahead Of Their Class.** *This year seven scholarship winners are Grumman dependents. Pictured here are (L to R) scholar Alfred Leach and parents Irene and Alfred; Steven Goldblatt with his father Peter; Gregg LoCascio and parents Fern and Frank; Grumman President John O'Brien; Michael Cohen and his mother Janet Schuman; Karen Marx and parents Margaret and Warren; Alex Meyer and parents Rochelle and Walter; and Steven Cimaszewski and parents Caroline and Tadeusz.*

# Scholarship Class Of '88 Honored At Luncheon

The dozen 1988 Grumman scholars received a hearty good luck handshake along with an award plaque from Grumman President John O'Brien, at the 45th Annual Scholarship Awards luncheon. The luncheon was held June 5, at the Milleridge Cottage in Jericho, Long Island.

"You are entering college at a time when all is right with the world," said O'Brien. "You've lived through the longest peacetime ever, at least between the world's superpowers.

"All sorts of indicators tell me that this country is not in decline but in ascendency and your generation will have the opportunity to prove that," said O'Brien. "I hope some of you will help prove that at Grumman after you graduate."

Guest speaker Glenn Spacht, deputy director of engineering for Aircraft Systems and a member of the scholarship selection committee, encouraged the students to keep a strong commitment to quality and creativity.

"The roots of the creative process are in the simple word 'why'," said Spacht. "Those among us who are thought to be creative are often those who find an opportunity to use technology to do things differently.

"When people asked, 'why not forward swept wings?', the X-29 was born," he said. Spacht was the deputy director on the X-29 Program.

Spacht also urged the students to enjoy their work. "I'm not suggesting that you not work hard at your chosen fields," he said. "But it is important that your vocation be your avocation — or at least a close second."

Spacht pointed out that the students' summer jobs at Grumman — a requirement of the scholarship — would prove useful in this regard by providing insight into what it is like to perform a particular job in the business world.

"Take charge of your careers," said Spacht. "Assess your strengths, weaknesses, preferences and dislikes — then set your goals accordingly."

The students were among 166 applicants to compete for the science and engineering scholarships. Selection was based on class rank, aptitude test scores and a personal interview. This year, seven of the winners are Grumman dependents.

The students were joined at their tables by their parents, guidance counselors, high school principals, Grumman hosts and Grumman advisors.

The hosts were corporate officers and senior managers whose careers relate to the students' chosen fields of study. Advisors will work with the same student for four years and offer advice when needed.

The students will receive a check for $6,000 each year for four years. In addition to their summer employment at Grumman, they are guaranteed a job offer after graduation.

## Obituaries

**John T. Cullen Jr.** of Maintenance Routine, Bethpage, Corporate Services Division, died June 4 at the age of 63. He had been with the company since 1966 and resided at 230 Sylvan Dr., West Hempstead, N.Y.

**Frank J. Tidd** of Building Protection, Bethpage, Corporate Services Division, died June 6 at the age of 59. He had been with the company since 1984 and resided at 26 Magnolia St., Central Islip, N.Y.

**Lewis Golden** of Management, Bethpage, Aircraft Systems Division, died May 26 at the age of 68. He had been with the company since 1943 and resided at 6 Potter La., Levittown, N.Y.

**They're The Tops.** *Grumman President John O'Brien joins the five non-dependent scholarship winners — (L to R) Charles Goetz, Peter Rosenbaum, Alexander Lee, Christine Legge, David Musicant — and Glenn Spacht, deputy director of Engineering. (Photos by Marie Trimborn)*

## Holiday On Ice For Snodgrass

Grumman retiree Reuben Snodgrass is back to cutting the grass around his Lake Ronkonkoma, Long Island, home. Just a few weeks ago he was halfway around the world racing in the World Ice Boat Championships. The U.S.S.R. hosted the week-long event in a little town 15 miles west of Leningrad.

There were 200 contestants from 13 nations. Even though he finished 120th, Snodgrass enjoyed every minute. "It was a marvelous trip," says Snodgrass, who was the 1962 international champion.

The Russians made sure their guests had enough energy to keep up with the racing. "We probably had double the average Russian's portion of food," he recalls. "We got fruit. Everywhere else there was no fruit. Every other day we had caviar for breakfast.

"Russia is so unlike the United States, but the people are very friendly," he says.

**Cool Guys.** *Retiree Rube Snodgrass (L) meets with Wim Van Acker of Holland, the European commodore of the ice boat racing association.*

# It Pays To Choose A Diet That's Right For You

Do you have a healthy diet? Do you know which foods are best for you?

"The key to a successful health plan is choosing a diet specifically designed to meet an individual's needs," says Elisabeth Keep, Grumman's nutritional expert.

"What might be ideal for a 190-pound male with a high cholesterol count might not be ideal for a 120-pound female with low calcium," says Keep. "For this reason, before you start a diet, you should consult a health professional."

However, there is a diet that Keep and other health professionals recommend to satisfy a healthy body's nutritional needs. "At least 55 percent of the diet's calories should come from complex carbohydrates," says Keep. "This includes fruits, vegetables, whole grain breads, pastas and cereals."

"Protein should be the source of at least 15 percent of the body's calorie intake, with 30 percent coming from fats. Lean meat, fish and poultry are good sources of protein while margarine, oil, or mayonnaise are fatty foods."

Salt and cholesterol are two big culprits in the average person's diet. Keep suggests no more than three grams of salt a day and a daily intake of less than 300 milligrams of cholesterol.

But how do you keep track? How do you know which foods have a lot of salt or cholesterol? "There is no easy way to go about it," says Keep. "There are dozens of charts that list foods and their ingredients. People simply have to become aware of what they are eating."

On the flip side are people so worried about what they eat that they move from one fad diet to the next without researching the diet's nutritional value.

"Some of these diets are appealing because they promise quick and easy weight loss," says Keep. Most people associate losing weight with better health. But unless a diet is balanced nutritionally, it could be harmful if followed over a long period of time.

"Many people who have a weight problem lose weight, regain it, then lose and regain," explains Keep. "This happens when the diet they choose is too low in calories, which most fad diets are. Without a sufficient amount of calories, the body's metabolism rate drops."

"In the first week of the diet, the individual does lose some weight," says Keep. "But after becoming discouraged or bored with the diet, old eating habits are usually resumed.

"Unfortunately, it takes a while to rebuild a body's metabolism," says Keep. "Therefore, more weight is gained than ever before because the body no longer has the ability to burn up the same calories it did before the crash diet.

"The trick is to be aware that you need to eat a variety of foods each day," says Keep. "By eating foods from each food group you not only meet all the body's basic nutritional needs, but you are giving your best shot at fighting off illness."

Keep works with Grumman's Food Services to make sure that well balanced meals are served each day. She is also available for consultation to all Grumman employees who wish to plan a diet that's right for them.

If you are interested in meeting with Keep, call the Grumman Medical Department at (516) 575-2101 for an appointment. ■

## Guidelines For Healthy Food Choices

### *Eat Less Fat*

- Eat smaller servings of meat. Eat fish and poultry more often. Choose lean cuts of red meat.
- Cook all meats by roasting, baking or broiling. Trim off all fat. Be careful of added sauces or gravy. Remove skin from poultry.
- Avoid fried foods. Avoid adding fat in cooking.
- Eat fewer high-fat foods such as cold cuts, bacon, sausage, hot dogs, butter, margarine, nuts, salad dressing, lard and solid shortening.
- Drink skim or low-fat milk.
- Eat less ice cream, cheese, sour cream, cream, whole milk, and other high-fat dairy products.

### *Eat More High-Fiber Foods*

- Choose dried beans, peas, and lentils more often.
- Eat whole grain breads, cereals, and crackers.
- Eat more vegetables—raw and cooked
- Eat whole fruit in place of fruit juice.
- Try other high fiber foods, such as oat bran, barley, bulgur, brown rice, and wild rice.

### *Use Less Salt*

- Reduce the amount of salt you use in cooking.
- Try not to put salt on food at the table.
- Eat fewer high-salt foods such as canned soups, ham, sauerkraut, hot dogs, pickles, and foods that taste salty.
- Eat fewer convenience and fast foods.

### *Eat Less Sugar*

- Avoid regular soft drinks. One 12-ounce can has nine teaspoons of sugar.
- Avoid eating table sugar, honey, syrup, jam, jelly, candy, sweet rolls, fruit canned in syrup, regular gelatin desserts, cake with icing, pie, or other sweets.
- Choose fresh fruit or fruit canned in natural juice or water.
- If desired, use sweeteners that don't have any calories, such as saccharin or aspartame, instead of sugar.

**They're All Ears.** *Roseanne Maglione of Grumman Aircraft Systems Division explains the world of business during Grumman Career Day at Bethpage High School. The Bethpage School District is one of seven districts Grumman is teamed with as part of Long Island's Industry and Education Partnership program. Maglione is the manager of Office Services for Advanced Programs.*

## Readership Survey

We don't want to do all the talking. We'd like to know what you think about the things you see in these pages. Your comments, suggestions and complaints are welcomed. Please take a few minutes and give us your opinions.

| Article | Great | Good | Poor | Didn't Read |
|---|---|---|---|---|
| Our values, objectives (P. 1) | ☐ | ☐ | ☐ | ☐ |
| New VDT law (P. 2) | ☐ | ☐ | ☐ | ☐ |
| New appointments (P. 3) | ☐ | ☐ | ☐ | ☐ |
| Will Bischoff (P. 6) | ☐ | ☐ | ☐ | ☐ |
| Healthy diets (P. 7) | ☐ | ☐ | ☐ | ☐ |
| Chairman's Letter (Back Cover) | ☐ | ☐ | ☐ | ☐ |

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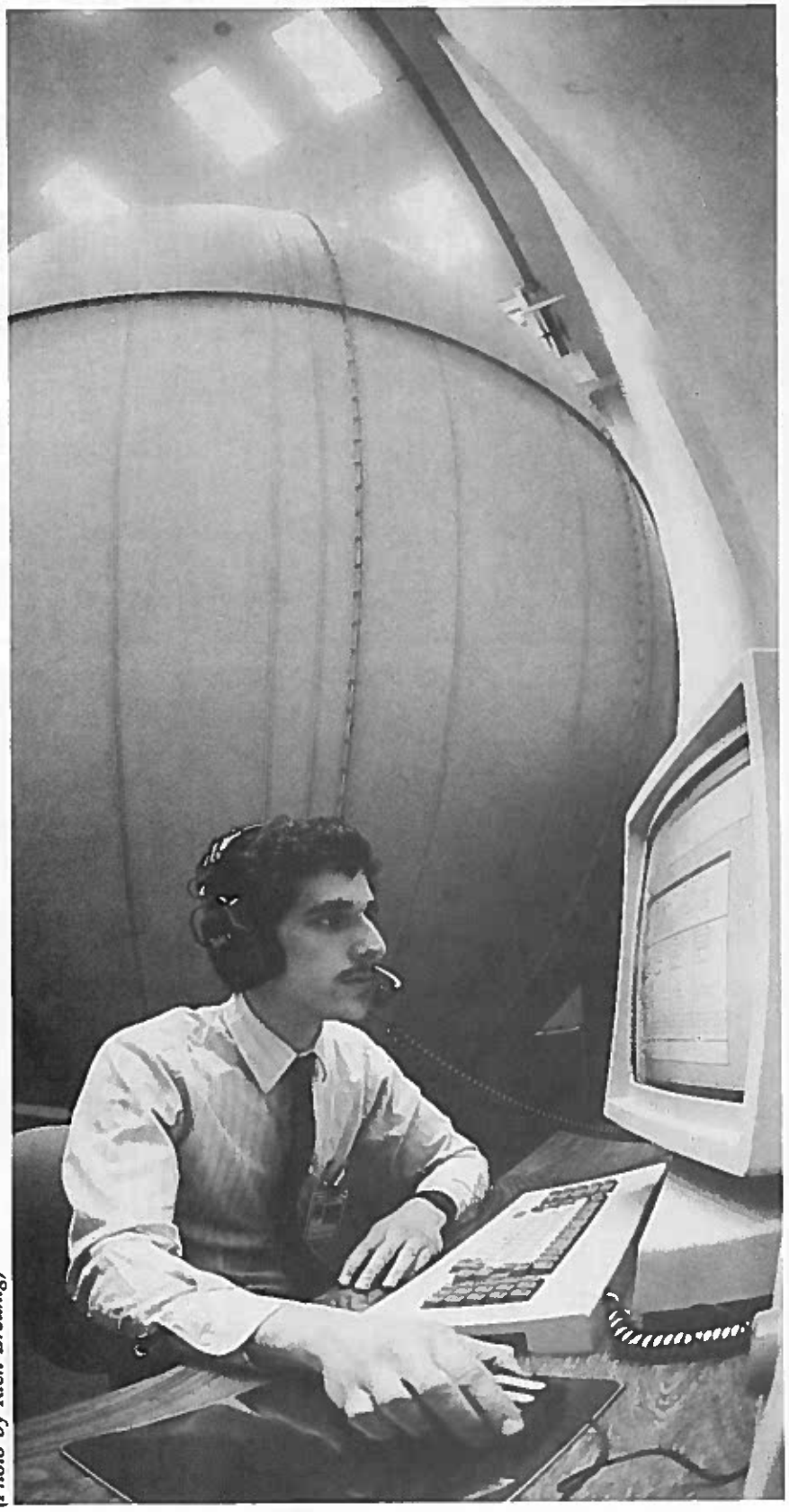
# GrummanWorld

June 24, 1988

(Photo by Rich Breunig)

## Grumman Begins An Era Of Renewal

Grumman President John O'Brien states the company's values and sets its objectives as Grumman begins an era of renewal.

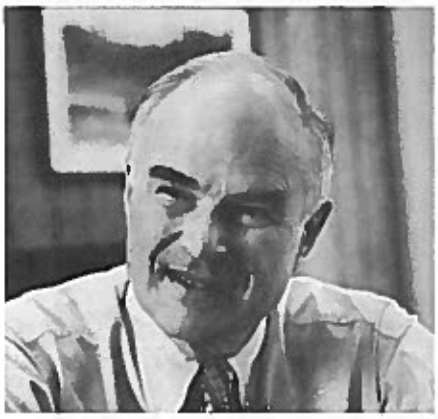
"We can go anywhere we want to if we all pull in the same direction," says O'Brien. See page 1.

## Caporali, Oram Get New Posts

On June 16 the board of directors elected Renso Caporali vice chairman-Corporate Technology, and appointed Pete Oram president of Aircraft Systems Division. See page 3.

**Technology For Tomorrow.** *In Bethpage's William T. Schwendler Development Center, assistant engineer Frank Verano tests software for the Simulation Systems Development Lab. The lab, scheduled to open early next year, will be used to test airborne, ground, at-sea and space-based systems. The dome behind Verano will provide the visual effects encountered in an actual mission.*

# A Letter From The Chairman



Nineteen years ago, a lunar module built by Grumman people touched down on the surface of the moon.

There is probably nothing in the collective memory of this company that rivals the pride, exhilaration, and sheer joy of that moment.

Grumman had joined the space fraternity in 1960 with the contract to design and build the Orbiting Astronomical Observatory. But after LM, our work in space entered a relatively slow period. I have always believed that this was a direct result of the fact that the original F-14 contract virtually pushed us to the brink of bankruptcy. For the next few years, our financial condition was seen as too fragile to sustain the rigors of a major space contract.

But the afterglow of the LM program has stayed with us for a long time. It gave Grummanites real confidence in themselves and their co-workers: an unshakeable belief that even the sky was no limit. Many of the extraordinarily capable people associated with LM went to work in different parts of the company. All of us felt and shared the confidence, the leadership and the boundless enthusiasm that took us to the moon and back. LM changed forever the character of this company.

Today, Grumman's role in space is the responsibility of the Space Systems Division, the Space Station Program Support Division, and part of Technical Services. We have an impressive lineup of programs.

In the Space Systems Division, we're on a Boeing team to design and build the Space Station's crew quarters. We're on a TRW team to build the Orbital Maneuvering Vehicle, or space tug. We're in competition for the Flight Telerobotics Servicer program. This is a remotely controlled robot that will be used in orbit to build the space station. The next phase of that competition is worth about $300 million.

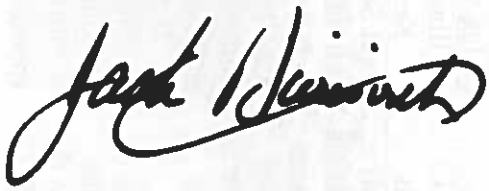
The largest piece of business for the Space Systems Division is in the military sector: the Boost Surveillance and Tracking System. BSTS will detect and track ballistic missiles in their boost phase, which is just after launch; it could be used to verify treaty compliance. We're in the final phase of this competition. A win could mean $10-20 billion in revenues for us, and the chance to open up an important new business. We're also doing significant work with neutral particle beams and space-based radar.

Our Space Station Program Support Division has the biggest systems integration job any company has ever tackled. As management contractor, we're helping NASA run the program — overseeing operations, requirements, systems engineering, safety, quality: the works. We'll help NASA put the four work packages together and make sure it all runs smoothly. With priced options, the award could be worth as much as $1.2 billion — and it's already turning a profit.

Part of the Technical Services Division has been working for years as a subcontractor to Lockheed on the Shuttle Processing team. Their job is to manage the huge network of computers associated with launching the shuttle, as well as instrumentation, software, ground support, and the labs that perform measurement and calibration. (The other people in Technical Services support our products and support our government customers in a variety of ways — but that's a topic for another letter.)

Our nation's ventures in space have yielded truly astonishing benefits in medicine, communications, agriculture, electronics, and dozens of other fields. Equally so for us: in addition to the wonderfully satisfying emotions we have felt, Grumman has been able to use and develop its most advanced capabilities to the benefit of all parts of the company. This is a key factor in evaluating Grumman's involvement in space.

These advances are not without risk. When you're pushing into new scientific discoveries, or expanding the limits of previous technologies, there's always the chance that you'll fail — and fail in a very public way. So far, Grumman has demonstrated that it really can deliver — even in situations where people didn't believe we could. We'll always keep our fingers crossed because we understand the challenges — and we'll continue to accept those challenges in order to realize our dreams.



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Chairman

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